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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,692	09/30/2003	Stephen H. Roby	T-6172A (538-58)	5082

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EXAMINER

ANTHONY, JOSEPH DAVID

ART UNIT	PAPER NUMBER
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1796

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/674,692	Applicant(s) ROBY ET AL.	
	Examiner Joseph D. Anthony	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 3/24/08 as an RCE and amendment.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,9,11,12 and 30-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,9,11,12 and 30-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION AFTER FILING SECOND RCE

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 9, 11-12 and 30-32 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Field et al. WO 99/18175.

Field et al. teaches a synthetic ester-containing lubricant with good soot-handling, see abstract. The ester additive is a polyol ester, preferably trimethylolpropane esterfied by mixed C8 to C10 alkanolic acids. The concentration of the polyol ester additive is from 5 to 50 % by weight of the total lubricant composition, see page 5. The synthetic ester-containing lubricant may further comprise known additives such as: viscosity modifiers, corrosion inhibitors, oxidation inhibitors, dispersants, anti-foaming agents, pour point depressants etc., see page 16. Applicant's claims are deemed to be anticipated over said disclosure of the reference. Please note that it is notoriously well known in the art that synthetic lubricants, minus optional additives, are made free of phosphorous and sulfur. As such, the synthetic lubricant used in the examples of the reference does not contain any phosphorous or sulfur.

In the alternative, Field et al. could be said to differ from applicant's claimed invention in that there is not a direct teaching (i.e. by way of a specific example) to a synthetic lubricating oil composition that actually comprises applicant's component (b) (i.e. polyol ester) within applicant's particular claimed concentration range of claims 1-5 and 9-12. It would have been obvious to one having ordinary skill in the art to make a lubrication oil composition that actually comprises applicant's component (b) within applicant's particular claimed concentration range since the reference directly discloses that the concentration amount for the trimethylol propane ester solublizer of C₈ to C₁₀ carboxylic acid is 5 to 50wt.%, see page 5.

Claims 1-5, 9, 11-12 and 30-32 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Culpon, Jr. U.S. Patent Number 5,151,205.

Culpon, Jr. teaches a lubricating composition for chain and gear drive mechanisms. The composition comprises a polyalphaolefin base oil (none of which are disclosed to contain any phosphorous content at all), an ester oil solubilizer (such as trimethylol propane ester of C₈-C₁₀ normal carboxylic acids or trimethylol propane ester of C₇-C₉ normal carboxylic acids) that read directly on applicant's claimed polyol ester of the listed general formula in claim 1, and 2 to 4 wt % of a polybutene tackifier, see abstract, column 1, line 60 to column 2, lines 49 and TABLE 2. The preferred concentration range of the claimed trimethylol propane ester solublizer of C₆ to C₁₂

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carboxylic acid is between 5 to 30 wt.%, see claims 1-2. The lubricating composition can contain optional additives such as extreme pressure and antiwear additives which may contain sulfur and phosphorus see Table 2 and claim 17. The composition replaces a mineral oil formulation and demonstrates persistent lubricity and substantially reduced smoking in chain and drive gear assemblies operated at high temperatures, see abstract.

Applicant's claims are deemed to be anticipated over the lubricating oil composition according to claims 1-2 when the concentration of the trimethylol propane ester solublizer of C₆ to C₁₂ carboxylic acid is at 5 wt.%. Please note that the synthetic base lubricating oil component in said lubricating oil composition, does not contain any phosphorous content at all and does not contain any sulfur content at all, see column 1, lines 60-65. As such, applicant's claimed limitation of independent claims 1 and 29 of: "wherein the composition has a phosphorous content not exceeding 0.08% by weight and a sulfur content not exceeding 0.2% by weight, based on the total weight of the composition" is inherently met. The addition of extreme pressure and antiwear additives which may contain sulfur and phosphorus are not required components, see independent claim 1, and are directly claimed to be only optional components, see dependent claim 17.

In the alternative, Culpon, Jr. could be said to differ from applicant's claimed invention in that there is not a direct teaching (i.e. by way of a specific example) to a lubricating oil composition that actually comprises applicant's component (b) (i.e. polyol ester) within applicant's particular claimed concentration range of claims 1-5 and 9-12. It

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would have been obvious to one having ordinary skill in the art to make a lubrication oil composition that actually comprises applicant's component (b) within applicant's particular claimed concentration range since the patent directly disclosed and claims that a preferred concentration amount for the trimethylol propane ester solublizer of C₆ to C₁₂ carboxylic acid is 5 wt.%, see claim 2.

Claims 1-5, 9, 11-12 and 30-32 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Deckman et al. U.S. Patent Application Publication No.: 2003/0166473 A1.

Deckman et al. teach an invention which concerns friction reducers for use in lubricating oil compositions which comprise certain groups of aromatic compounds, esters, narrow mixtures of base stocks, and/or amorphous polymers such as amorphous olefin copolymers. These compositions can provide substantial reductions in the coefficient of function and fuel economy improving benefits when admixed to lubricating oils without deleterious effects such as instability, undesirable high viscosities and deposits. In one aspect of the invention, pentaerythritol esters and optionally triol esters are added to lubricating oil compositions to provide reduced friction and improved fuel economy. In a second aspect of the invention, similar results are obtained by adding hydrocarbyl aromatics to a lubricating oil composition containing one or more of Groups II and III base stock. In a third aspect, the invention concerns a lubricating oil composition comprising an amorphous olefin copolymer and one or more of Groups II and III base stocks. In one embodiment, the third aspect also includes one

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or more of hydrocarbyl aromatics and polyol esters as part of the composition. In a forth aspect, moderate concentrations of hydrocarbyl aromatics are used in a lubricating oil composition comprising paraffinic base oil stocks and preferably a borated polyisobutenyl succinimide ashless dispersant, see abstract. Directly taught examples of preferred trio esters are the synthetic esters of trimethylolpropane, see sections [0018], [0040]-[0041]. Said esters of trimethylolpropane are preferably used at a concentration within the base lubricating oil of 2% by weight, see sections [0120], [0123] and Tables 3-6. The further inclusion of known additives for lubricating oil compositions are taught. One of the specifically taught preferred additives is amine antioxidants such as dioctyldiphenylamine, see section [0065]. Applicant's claimed lubrication oil compositions are thus deemed to be anticipated over the lubricating oil compositions taught by Deckman et al. Please note that the lubrication oil compositions taught by Deckman et al. would inherently meet applicant's claimed phosphorous and sulfur limitations because the required components, such as the hydrocarbon base oil and esters of polyols, do not contain any phosphorous and sulfur.

In the alternative, Deckman et al. may "differ" from applicant's claimed composition in that it is unclear if any of the specific lubricating oil compositions set for in the Publication actual comprises a diphenylamine, such as an dioctyldiphenyl amine, as an antioxidant. It would have been obvious to one having ordinary skill in the art to use the direct disclosure of Deckman et al's section [0065] as strong motivation to actually include a diphenylamine, such as dioctyldiphenylamine, as an antioxidant in the lubricating oil compositions.

Claims 1-5, 9, 11-12 and 30-32 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Deckman et al. U.S. Patent Number 6,869,917.

Deckman et al. teach an invention that relates to a fully formulated lubricants comprising poly α -olefins (PAOs), prepared from a mixed α -olefin feed, which exhibit superior Noack volatility at low pour points, and methods for preparing the fully formulated lubricants. The fully formulated lubricants include PAOs that include mixtures of 1-decene and 1-dodecene. The PAOs may be prepared by polymerization/oligomerization using an alcohol promoted BF_3 in conjunction with a combination of co-catalysts. The further inclusion of additives for lubricating oil compositions are taught. One preferred such additives are the synthetic esters of polyols, preferably the synthetic esters of trimethylolpropane used at a concentration not to exceed 5% by weight of the lubricating oil composition, see column 11, lines 19-65. Another one of the specifically taught preferred additives is amine antioxidants such as dioctyldiphenylamine, see column 15, line 66 to column 16, line 12. Applicant's claimed lubrication oil compositions are thus deemed to be anticipated over the lubricating oil compositions taught by Deckman et al. Please note that the lubrication oil compositions taught by Deckman et al. would inherently meet applicant's claimed phosphorous and sulfur limitations because the required components, such as the hydrocarbon base oil and esters of polyols, do not contain any phosphorous and sulfur.

In the alternative, Deckman et al. may “differ” from applicant’s claimed composition in that it is unclear if any of the specific lubricating oil compositions set for in the Patent actual comprises a synthetic ester of trimethylolpropane and a diphenylamine, such as a dioctyldiphenyl amine as an antioxidant. It would have been obvious to one having ordinary skill in the art to use the direct disclosure of Deckman et al.’s column 11, lines 19-65 and column 15, line 66 to column 16, line 12 as strong motivation to actually include a synthetic ester of trimethylolpropane and a diphenylamine, such as dioctyldiphenylamine, as an antioxidant in the lubricating oil compositions.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422

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F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-5, 9, 11-12 and 30-32 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-46 of copending Application No. 11/046,994. Although the conflicting claims are not identical, they are not patentably distinct from each other because the pending claims are a subset of the pending claims in S.N. 11/046,994.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

In regards to the above prior-art rejections made over Field et al. it is clear from applicant's remarks that applicant has misread the scope of Field et al's invention when applicant insists that Field et al's invention requires: "three essentially components: (1) a lubricating oil, (2) a polyol ester and (3) a hindered phenol as an antioxidant" see page 8 of the REMARKS. A quick look at Field et al's specification at page 6, lines 2-9 makes it clear that the lubricating oil compositions "may be improved" by the further inclusion of

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an antioxidant, “more especially a hindered phenol antioxidant”. Field et al. thus clearly discloses that a hindered phenol is NOT a required component! Hindered phenols are only optional components according to Field et al’s invention. In fact antioxidants themselves are only an optional component of Field et al’s invention. All because Field et al’s Abstract of the invention mentions an antioxidant as a component of the composition, does not mean that all disclosed compositions must have a hindered phenol. The composition given in Field et al’s abstract was given by way of illustration and not by way of limitation of compositions taught by Field et al. In any case, hindered phenols directly fall within the scope of many of the different types of additives claimed in applicant’s independent claim 1, such as co-solvents. Finally, Field et al. also directly discloses that applicant’s required diphenylamine antioxidant component, is an effective suitable antioxidant for Field et al’s compositions, see page 12, lines 19-23. Applicant further argues that “*governing regulatory agencies did not have the low phosphorous and low sulfur requirements that exist in the industry today*” at the time of filing of the Field et al’s invention, i.e. October 3, 1997. Applicant further argues: “*Thus even by employing a synthetic oil inherently free of sulfur, phosphorous and metals, Field et al would not have possibly contemplated claiming a lubricating oil composition having any limits to the phosphorous and sulfur content therein and would have used additives containing high amounts of phosphorous and sulfur. As such, the lubricating oil compositions of Field et al would not possibly place the claimed lubricating oil composition of Claim 1 in the possession of the public*”. The Examiner must totally disagree with applicant’s position. The FACT of the matter is that Field et al. disclosed

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lubricating oil compositions meet applicant's claimed phosphorous and sulfur limitations because the required components in Field et al.'s disclosed compositions do not contain any phosphorous and sulfur. Even if applicant is correct that Field et al. would not have contemplated having any limits on the phosphorous and sulfur content due to governmental regulations and environmental issues (which the Examiner does not agree with), such is totally moot, since Field et al.'s disclosed lubrication oil compositions are free of phosphorous and sulfur. As such, phosphorous and sulfur free lubrication oils, containing applicant's claimed polyol esters, have long been in possession of the public since such are taught by Field et al..

The prior-art rejection made over Culpon, Jr. U.S. Patent Number 5,151,205, has been reinstated in light of applicant's deletion of the New Matter limitation of: "wherein a tackifier is not present in the composition". Applicant's amending the preambles of independent claims 1 and 31 to include "internal combustion engine" to modify the oil composition is noted, but such is deemed to be only an intended use limitation for the claimed compositions. In any case, Culpon, Jr.'s chain and drive gear lubricating oil compositions are deemed to be effective lubricating compositions for internal combustion engines. It is noted that applicant has provided no factual data to support his argument that Culpon, Jr's lubricating compositions would not work as a lubricant oil for internal combustion engines. At best applicant has only discovered a new use for Culpon, Jr's chain and drive gear lubricating oil compositions, but such is moot since applicant's claims are drawn towards compositions.

The following Examiner's comments were made in various previous office actions and are repeated here because they are still deemed to be highly relevant to the pending claims. Applicant's arguments in the REMARKS section of the amendment filed on 8/31/07 state that: "Thus, the lubricating oil composition as presently set forth in amended claim 1 would not even contemplate a tackifier therein." (see page 7, lines 18-19) is not accepted by the examiner. The reasons for this is because Culpon's required tackifier component clearly reads on applicant's claimed additives, such as friction modifiers, and viscosity index improver. On page 18, line 18 to page 19, line 4 of applicant's specification, applicant clearly teaches polymers and copolymers as viscosity index improvers. Culpon's polybutene tackifier species clearly falls within applicant's generic disclosure of viscosity index improvers. Furthermore, many other of applicant's claimed functional additives would also seem to read on Culpon's tackifier component since such a tackifier could function as a corrosion-inhibitor, an anti-icing agent, a pour point depressant etc., even if such functions are not directly taught by the reference.

Applicant's arguments filed 3/29/07 with the Amendment and RCE have been fully considered but are not persuasive to put the application in condition for allowance for the reasons set forth above. Applicant's main argument against the applied Culpon, Jr. patent is that: *"At the time of filing the Culpon application, i.e., May 13, 1991, governing regulatory agencies did not have the low phosphorous and low sulfur requirements that exist in the industry today. Thus even by employing a synthetic oil inherently free of sulfur, phosphorous and metals, Culpon would not have possibly*

contemplated claiming a lubricating oil composition having any limits to the phosphorous and sulfur content therein and would have used additives containing high amounts of phosphorous and sulfur. As such, the lubricating oil compositions of Culpon would not possibly place the claimed lubricating oil composition of Claim 1 in the possession of the public.”, see pages 7-8 of the amendment. The Examiner must totally disagree with applicant's position.

The FACT of the matter is that Culpon, Jr. claimed lubricating oil compositions meet applicant's claimed phosphorous and sulfur limitations because Culpon's claimed compositions of claims 1-2 do not contain any phosphorous and sulfur. Even if applicant is correct that Culpon would not have contemplated having any limits on the phosphorous and sulfur content due to governmental regulations and environmental issues, such is totally moot, since Culpon's taught and claimed lubrication oil compositions are free of phosphorous and sulfur, and meet all of applicant's other claimed limitations. As such, phosphorous and sulfur free lubrication oils, containing applicant's claimed polyol esters, have long been in possession of the public since such are taught by Culpon. Furthermore, the examiner rejects applicant's contention that Culpon would have no motivation to make *lubricating oil compositions having any limits to the phosphorous and sulfur content therein*. Applicant's attention is drawn to Culpon's column 1, lines 63-65 wherein it is stated: “*These synthetic base oils are inherently free of sulfur, phosphorous and metals **and produce less obnoxious smoke**.*” To make lubricant compositions that produce less obnoxious smoke was a recognized benefit at the time of filing of Culpon's invention!

Examiner Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Joseph D. Anthony whose telephone number is (571) 272-1117. If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached on (571) 272-1498. The centralized FAX machine number is (571) 273-8300. All other papers received by FAX will be treated as Official communications and cannot be immediately handled by the Examiner.

/Joseph D. Anthony/
Primary Examiner, Art Unit 1796
5/2/08